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## **THE PRODUCTION AND CARE OF MILK AND CREAM.**

**PREPARED IN THE DAIRY DIVISION OF THE BUREAU OF ANIMAL INDUSTRY.**

A large portion of the milk and cream produced in the Southern States is sold in the form of butter. Much of this is of poor quality and therefore is sold at low prices. One of the principal causes of the poor quality of this butter is poor milk and cream, and it is the purpose of this leaflet to point out how a better quality of milk and cream may be produced.

### **THE COW.**

To make good butter it is necessary to have clean milk from clean and healthy cows. Milk from unhealthy cows is not a safe article of food, even though there is no visible dirt in it. Special attention should be given to the condition of the udder, and any milk which appears slimy, ropy, or otherwise abnormal should not be used.

The body of the cow should be kept free from mud and manure. The hair on the flanks and udder should be clipped, as long hair favors the accumulation of filth. When the cow is kept in the stable the bedding should be clean and dry and used in sufficient quantities to keep the cow comfortable.

### **THE STABLE AND BARNYARD.**

The stable should be well lighted, well ventilated, and so constructed that it can be easily kept clean. It should have a hard, non-absorbent floor, without cracks where filth can collect. Dust or cobwebs should not be allowed to accumulate on the walls and ceiling, and it is a good plan to whitewash the walls and ceiling of the stable at least once a year. Manure should be removed at least once a day. The manure pile should be some distance from the stable; hog

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NOTE.—Intended for farmers in the cotton belt who desire to diversify their farming because of the economic crisis which adversely affects the cotton crop at this time.



houses, privies, and poultry houses should be far enough away so as not to contaminate the stable air, and the barnyard should be well drained so that there will be no mudholes. A clean yard is a great help in keeping the cows from becoming soiled by mud and manure. The yard should drain away from the buildings, and manure should not be allowed to accumulate in it.

### FEEDS AND FEEDING.

The odor and flavor of milk are very readily affected by certain feeds, such as rape, cabbage, turnips, and silage, and such feeds should not be given immediately before milking. If fed after milking they will not taint the milk. When the pastures are overrun with garlic or wild onion the cows should be removed from the pasture three or four hours before milking. Moldy and decayed feed and such other feeds as may injuriously affect the cows' health and the character of the milk should be carefully avoided. Dusty hay should not be fed immediately before milking, nor should the cows be bedded at this time, as either of these operations will cause a circulation of dust in the stable which will affect the cleanliness of the milk. It is important that the water, of which the cow needs an abundance, should be fresh and pure.

### UTENSILS.

All utensils which come in contact with milk should be made of smooth, durable material which can be easily cleaned. Utensils of wood and crockery are apt to be porous; it is impossible to clean them properly, and they should not be used in handling milk. Vessels made of heavy tin are good. The joints should be well closed with solder. All rusty utensils should be discarded.

All milk utensils should be thoroughly washed after each time of using and scalded with boiling water, special care being given to strainers made of cloth. Milk utensils should not be used for any other purpose than that for which they are intended, and when not in use should be kept in some place free from dust and odors and screened so as to protect them from flies. Improperly washed utensils acquire a bad odor and cause warm milk placed in them to absorb this odor; dirty utensils also cause the milk to sour quickly.

All vessels used in handling milk should be rinsed with cold or lukewarm water and then washed in hot water containing some good washing power, such as sal soda. Soap is not desirable for washing milk utensils. Fiber brushes are much better than rags for washing purposes, as they are more easily kept clean and do better work.

After the utensils are washed thoroughly they should be rinsed in scalding water and inverted on a rack in a clean place, screened from flies, but exposed to fresh air and sunshine, and allowed to remain there until required for use.

Strainer cloths should be thoroughly washed and boiled each day.

One of the most important things in the production of milk and cream of good quality is the care of the utensils in which they are handled. Utensils can not be properly cleaned without an abundance of boiling water. Equipment for furnishing this water is absolutely necessary where milk and cream of the best quality are produced. For a description of this equipment see the special leaflet on "Farm Conveniences for Handling the Cow and her Product."

### MILKING.

Before milking the cow's udder and flanks should be wiped off with a damp cloth to remove any dust and loose hair which might fall into the pail. The milkers should milk with dry, clean hands, and should practice cleanliness in every respect while handling the milk.

### CARE OF MILK AND CREAM.

Milk, whether to be sold in its natural state or to be separated, should be removed from the stable immediately after milking. If it is not to be separated it should be cooled at once to a temperature of 50° F. or lower and held there until disposed of.

The separator will produce cream of better quality than is possible with any other means of separation. If a separator is used, it should be thoroughly washed and scalded after each time it is used. If the milk is to be hand skimmed, it should be put into "shotgun" cans for the cream to rise, and the cans should be well covered to keep dust and insects out and be kept in a room free from odors. This is better than putting the milk into shallow vessels.

Thin cream sours more quickly than rich cream. With a rich cream there is also less bulk to handle, more skim milk for feeding purposes, and the cream is in better condition to make into butter. It is desirable to skim the milk so as to produce a cream containing between 30 and 35 per cent of butter fat. A great advantage in using a separator is that the richness of the cream can be easily regulated. Cream sours very readily at temperatures above 50° F.; hence it should be kept as much below this temperature as possible.

If warm cream is mixed with cold cream, the whole mass is warmed thereby, and souring will follow more quickly; therefore the newly separated cream should be cooled before adding it to the cream on hand. A thorough stirring each time newly separated cream is added

to other cream will bring the whole mass to an even temperature throughout.

The cream should be kept in a clean, well-ventilated place, in order that odors may not be taken up by it. If cream is sold to the ice-cream or retail trade, it should be delivered daily. If sold to the creamery, it should be delivered at intervals so frequent that it will reach the creamery in good condition. If properly cared for, cream need not be delivered oftener than twice a week in the winter and three times during the summer. Cream cans should be protected with blankets during delivery in the summer months, to prevent a marked rise in the temperature of the cream.





